



36936000025469



LIBRARY COPY

JUN 21 1965

ONTARIO WATER
RESOURCES COMMISSION

HUNTSVILLE
SEWAGE TREATMENT PLANT
ANNUAL REPORT
1960

PREPARED BY

THE DIVISION OF PLANT OPERATIONS

ONTARIO WATER RESOURCES COMMISSION

TD
367
.A56
H86
1960
MOE

TD
367
.A56
H86
1960

Huntsville : sewage treatment
plant.
82199

HUNTSVILLE SEWAGE TREATMENT PLANT



Environment Ontario
Laboratory Library
185 Macdonnell Rd.
Etobicoke, Ontario M9P 3V6
Canada

INTRODUCTION

On March 5, 1957, a meeting was held in Huntsville to discuss the existing sewage problem and outline what OWRC assistance was available. It was decided at this meeting that Council should immediately instruct R. V. Anderson and Associates, Consulting Engineers, to revise and bring up to date this report of 1954.

On September 10, 1958, the Ontario Water Resources Commission issued their certificate of approval for the construction of a sewage treatment plant of activated sludge type with a capacity of 300,000 U.S. gallons per day, and three pumping stations, together with sanitary sewers on various streets.

The construction of this project was divided into two parts, Contract "A" and Contract "B". Contract "A" consisted of sanitary sewers and was awarded to Sherk Construction Ltd. for \$147,153.87, while Contract "B" consisted of the construction of the sewage treatment plant and pumping stations which was awarded to Foundation Company of Ontario at a cost of \$241,871.00.

DESIGN DATA

The dry weather flow for which the plant is designed is 300,000 gallons per day or, for a population of 3,000 at 100 gallons per capita per day. Since May 8, 1960, 7,072 million gallons have been treated with an average daily flow of 29,700 gallons. The maximum daily flow for this period was 300,000 gallons while the minimum recorded daily flow was 10,000 gallons.

DESCRIPTION OF OPERATION

The sewage from the municipality is collected in a number of sanitary and combined sewers. Most of these sewers flow to one of the three pump-

ing stations where the sewage is lifted so that it will flow to the sewage treatment plant.

The sewage enters the plant through a grit removal chamber where the sand is removed and then continues to the primary clarifier.

The sewage is retained in the primary clarifier for approximately two hours before passing on to the aeration tanks. During the detention time in the primary clarifiers, the solids settle to the bottom of the clarifier and are pumped to the digester.

In the aeration tank, the primary effluent is mixed with activated sludge from the secondary clarifier and is referred to as mixed liquor. It is aerated by two Chicago Pump Co. mechanical aerators. When the mixed liquor is aerated for a period of time, the suspended collòidal, and dissolved particles will coalesce to form a light feathery flock which settles slowly under quiescent conditions. The clear liquid from this process flows over the weirs in the final clarifier through the chlorine contact chamber and into the Muskoka River. The settled sludge is returned to the aeration tanks.

Before the effluent is discharged into the river, it is treated with chlorine to ensure adequate disinfection.

The sludge that is settled in the primary clarifier is pumped to the digester. In the digester the sludge is kept at a temperature of 90° F and mixed by circulating the contents through a heat exchanger. The sludge is here broken down by bacterial action to a thick, odourless, black liquid. The liquid sludge is a humus like material which is a good soil conditioner. Sludge gas formed during the process is used as a fuel to heat the digester and control building.



Digitized by the Internet Archive
in 2015

<https://archive.org/details/huntsvillesewage25469>

DETAILS OF OPERATION

The sewage treatment plant was placed into operation on November 23, 1958. Relatively few difficulties have been encountered in the operation of this plant.

The automatic controls in pumping station #3 were not functioning satisfactorily during the initial stages of operation.

Some difficulty was encountered in the operation of the chlorinator i. e. chlorine dosage proportional to flow. The difficulty was found to be in the flow meter which the manufacturer has corrected.

The partial blockage of the twelve inch sanitary sewer along Brunel Road has reduced sewage flows to the plant. As this report is being written, some work has been done in cleaning the sewer, but possibly more remains to be done. The low flows encountered have produced problems such as the underloaded digester which results in low gas production.

The quality of the effluent leaving the plant is very good. The average BOD for which results are available is 12 ppm while the suspended solids content was 23 ppm.

Facilities in the laboratory to run dissolved oxygen tests would greatly help in the control of the treatment process.

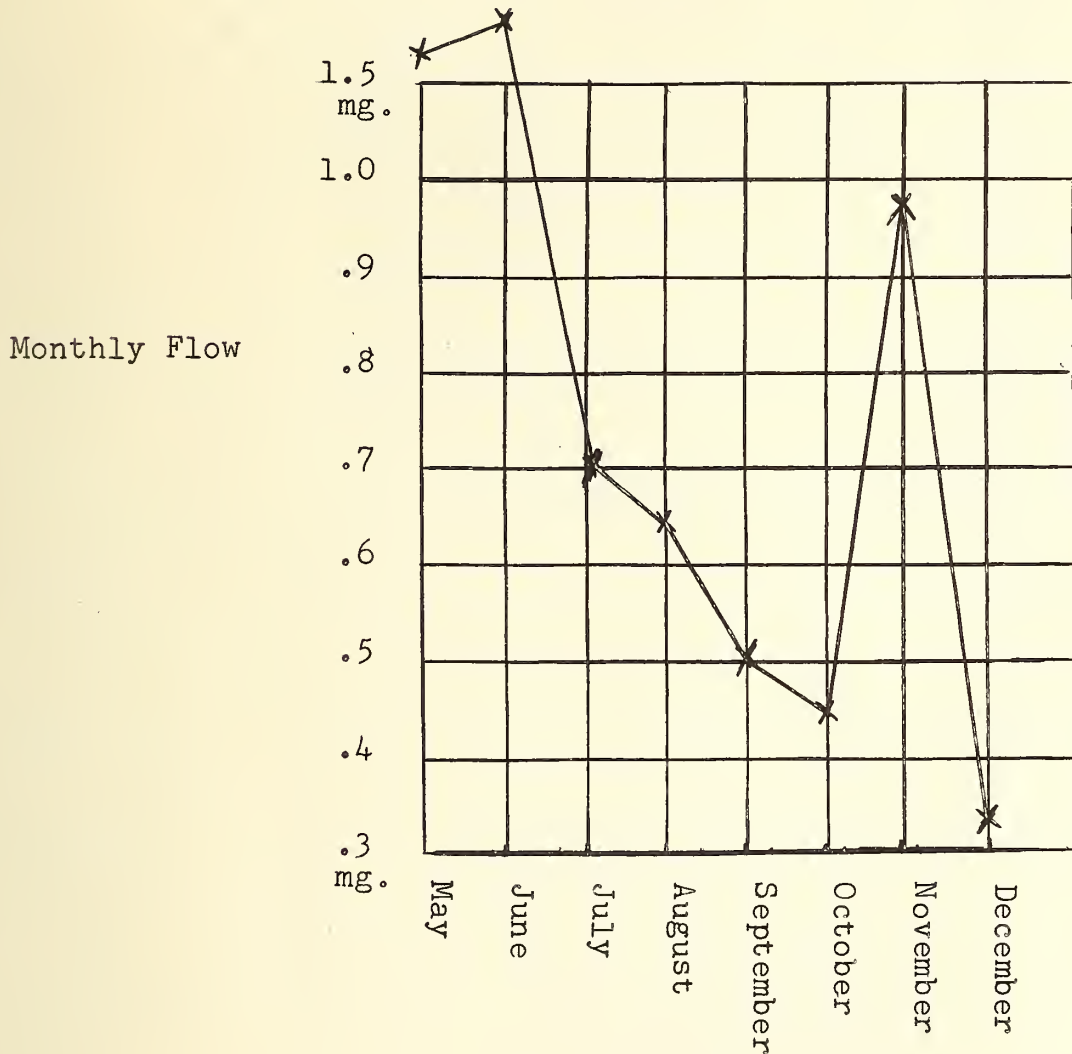
PERSONNEL

Mr. Edward Diplock is the chief operator at the sewage treatment plant. He joined the Commission staff in November of 1959. He was formerly employed as a mechanical maintenance man and electrician.

The Diplock's have a family of five children, Susanne, Bud, Doug, Ernie and Don, ranging in ages from eight to seventeen years.

During and following the war, Mr. Diplock served ten years with the Royal Canadian Navy. He has been a resident of Huntsville for seven years.

OPERATING COSTS



The total cost of operating the sewage treatment plant during the year 1960 was \$7665.81. Since the beginning of May, 7.072 million gallons have been treated at a cost of \$7665.81 or .77 cents per thousand gallons. An increased operating cost is anticipated for the next year due to the additional cost of disposing digested sludge.



Estimated Cost for 1961

Payroll	\$ 3800
Fuel	1000
Power	1500
Chemicals	680
Gen. Supplies	400
Equipment	300
M. & R.	300
Miscellaneous	<u>600</u>
	\$ 8580

THE JOURNAL OF THE

1881

1882

1883

1884

1885

1886

1887

1888

1889

1890

LABORATORY LIBRARY

96936000118713

[illegible]

TD227/H86/W38/1960/MOE
Ontario Water Resources Co
Huntsville sewage
treatment plant : atez
annual report c.1 a aa
1960



Environment Ontario
 1200 Bayview Ave.
 7th Floor
 Etobicoke, Ontario M9P 3V6
 Canada

**TD
367
.A56
H86
1960**

Huntsville : sewage treatment
plant.
82199

